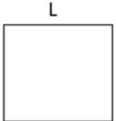

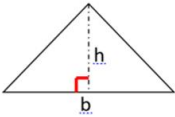
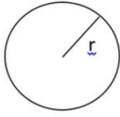
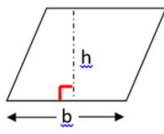
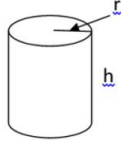
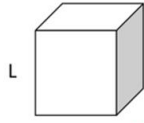
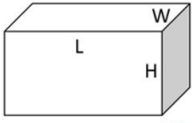
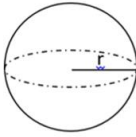
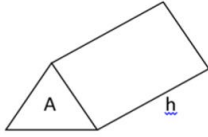


Topic 11: Area/Volume

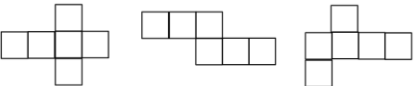
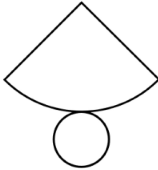
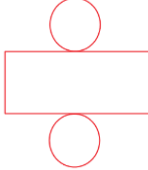
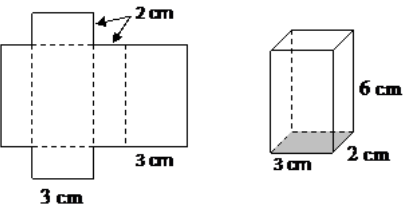
1) **The Formulae:** (Note the ones with an asterisk next to them are **NOT** in the Tables)

<p>Square:</p>  <p>Area = L^2 *</p> <p>Per = $4L$ *</p>	<p>Rectangle:</p>  <p>Area = $L \times W$ *</p> <p>Per = $2L + 2W$ *</p>	<p>Triangle:</p>  <p>Area = $\frac{1}{2} b \times h$</p>	<p>Circle:</p>  <p>Area = πr^2</p> <p>Circum = $2\pi r$</p>		
<p>Parallelogram:</p>  <p>Area = $b \times h$</p>	<p>Cylinder:</p>  <p>Vol = $\pi r^2 h$</p> <p>CSA = $2\pi r h$</p>	<p>Cube / Cuboid:</p>  <p>Vol = L^3 *</p> <p>TSA = $6L^2$ *</p>	<p>Cube / Cuboid:</p>  <p>Vol = $L \times W \times H$ *</p> <p>TSA = $2LW + 2WH + 2HL$ *</p>	<p>Sphere:</p>  <p>Vol = $\frac{4}{3} \pi r^3$</p> <p>CSA = $4\pi r^2$</p>	<p>Prism:</p>  <p>Vol = Area A \times h</p>

2) Solving Problems:

<p>a) Tips for solving Area/Volume problems:</p> <ol style="list-style-type: none"> 1. Draw a good-sized diagram. 2. Label and fill in all information given. 3. Identify the shapes in the question. 4. Write down relevant formulae for those shapes. 	<p>b) Recasting/Remoulding:</p> <ul style="list-style-type: none"> • Melting down shapes and making new shapes. <p style="text-align: center;">Vol of Old Shape = Vol of New Shape(s)</p>
<p>c) Objects submerged in water:</p> <p style="text-align: center;">Vol of Object Submerged = Vol of Displaced Water</p>	

3) Nets:

<p>➤ The net, of a particular shape, is a flat surface that, when folded, can be made into that shape.</p> <p>a) Nets of Cubes:</p> <p>➤ There are 11 nets for a cube. Some are shown below.</p> 	<p>c) Net of a Cone:</p> 	<p>d) Net of a Cylinder:</p> 
<p>b) Net of a Cuboid:</p> 	<p>d) Nets for some Polygonal Prisms:</p> 